

CLAIMS

1. A nonaqueous electrolyte battery comprising a positive electrode, a negative electrode, and a nonaqueous electrolyte, wherein the above nonaqueous electrolyte contains at least a cyclic carbonate having a carbon-carbon π bond and the above positive electrode contains a positive active material comprising a composite oxide represented by a composite formula: $\text{Li}_x\text{Mn}_a\text{Ni}_b\text{Co}_c\text{O}_2$ (wherein $0 \leq x \leq 1.1$, $a+b+c=1$, $|a-b| < 0.05$, $0 < c < 1$) and having an α - NaFeO_2 -type crystal structure.

2. A nonaqueous electrolyte battery comprising a positive electrode, a negative electrode, and a nonaqueous electrolyte, wherein the above positive electrode contains a positive active material comprising a composite oxide represented by a composite formula: $\text{Li}_x\text{Mn}_a\text{Ni}_b\text{Co}_c\text{O}_2$ (wherein $0 \leq x \leq 1.1$, $a+b+c=1$, $|a-b| < 0.05$, $0 < c < 1$) and having an α - NaFeO_2 -type crystal structure and the battery is fabricated using a nonaqueous electrolyte containing at least a cyclic carbonate having a carbon-carbon π bond.

3. The nonaqueous electrolyte battery according to claim 1 or 2, wherein the above cyclic carbonate having a carbon-carbon π bond is one or more selected

from the group consisting of vinylene carbonate, styrene carbonate, catechol carbonate, vinylethylene carbonate, 1-phenylvinylene carbonate, and 1,2-diphenylvinylene carbonate.

4. The nonaqueous electrolyte battery according to claim 1 or 2, wherein the above negative electrode contains a graphite.

5. The nonaqueous electrolyte battery according to claim 1 or 2, wherein the above nonaqueous electrolyte uses a mixture of an inorganic lithium salt and an organic lithium salt having a perfluoroalkyl group.